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24. MASS FEEDING OF BARONET BUTTERFLY *SYMPHAEDRA NAIS* FOSTE.. ON HONEY DEW DROPS

In the month of November we observed several individuals of *Symphaedra nais* feeding on the secretion fallen on the ground from the silk cotton tree (*Bombax ceiba*). The secretion appeared like oil drops sprinkled on the ground and the butterflies were rubbing their proboscis on it. On subsequent visits, the same phenomenon was observed under a *Bridelia retusa* tree overhanging the roof of a building. The secretion had fallen from the branches growing over the roof.

On taking a closer look, we observed that the leaves of *Bridelia* were heavily infested with various stages of nymphs and adult insects. The insects were collected and subsequently identified as *Tenaphalara acutipennis* Kuwayama, Family Psyllidae. They are known to feed on young shoots and leaves of *Bombax ceiba.* The nymphs exude a copious amount of honey dew and also produce a waxy secretion. Usually, 4 to 5 butterflies were seen feeding, with a maximum number upto 10 at a time. The number of individuals visiting the site was greater in the morning, and the activity continued till late noon.

We are thankful to Dr. C.A. Viraktamath Department of Entomology, University of Agricultural Sciences, GKVK, Bangalore for identifying the psyllid.

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25. POLYMORPHISM IN THE IMMATURE STAGES OF *OTHREIS FULLONIA* CLERCK

(*With two plates*)

Seasonal colour variation in adult Lepidoptera is a known fact. It has also been recorded that early instars of a few hawk moths show seasonal colour variation (Sevastopulo, 1940).

During a survey of the lepidopteran fauna of Sanjay Gandhi National Park (SGNP), Mumbai, I made some remarkable observations on the genus *Othreis*. The genus is well represented in SGNP. *Othreis fullonia,* commonly called the Orange Underwing, is also well represented in this area. The adult of the species has been described by Hampson (1894), Barlow (1981) and its early stages by Sevastopulo (1940). However, there is no mention of its life cycle and colour variation in different seasons. Hence, a study of the life cycle of *Othreis fullonia* was undertaken. The data was collected over a period of two years from July 1995 to December 1997.

The early instars are common during the peak monsoon period and feed exclusively on *Cocculus hirsutus,* commonly called as Vasan Vel. The early instars were collected from the study site and reared at home in rearing tanks. Detailed observations were made, which are described later. A total of 173 larvae were reared during the study period.


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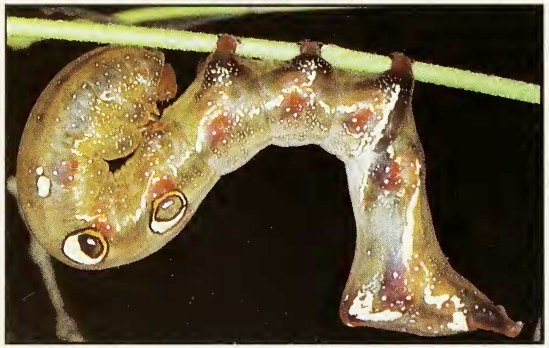
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Fig. 1-4: *Othreis fullonia* wet form: 1. larva; 2. larva; 3. pupa; 4. adult male
Fig. 5: *Othreis fullonia* dry form larva

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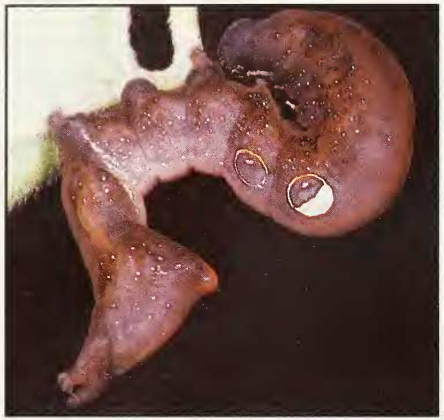

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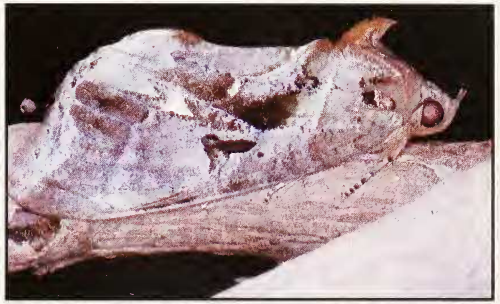

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Fig. 1-3: *Othreis fullonia* dry form 1. larva; 2. pupa; 3. adult female

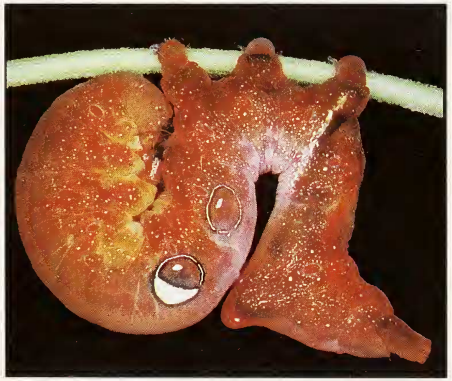

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Fig 4-6: *Othreis fullonia* wet form 4. larva; 5. pupa; 6. adult female

The BNHS and the author gratefully acknowledge sponsorship of the colour printing of this plate by the Mehta Scientific Education and Research Trust

The larval stage of *Othreis fullonia* showed sexual polymorphism. The colour pattern of the male and female larvae varies significantly in the dry and wet season. Thus, the male and female of *Othreis fullonia* can be distinguished at the larval stage. The adults showed very little colour variation.

Description of larvae

The general description of the larvae is given by Barlow (1981) and Sevastopulo (1940). The present study shows a few variations compared to earlier studies.

Male Larva

Wet (monsoon) form: The first three instars are green in colour. The larvae then become red brown and remain thus till pupation (Plate 1, Fig. 1-2). The legs in early instars are pale yellow and become red from 4th instar onwards. 4th and 5th instars are profusely spotted with white and blue spots which are fewer in first three instars. Spiracular patches are red and prominent and connected by discontinuous white bands. 5th and 6th somites bear black ocelli with yellow iris and white pupils.

Dry (post monsoon): The larvae are dark chocolate brown in all five instars (Plate 1, Fig. 5). The colour is much darker in the first three instars and becomes reddish brown later. Legs are red throughout. 5th and 6th somite bear black ocelli with yellow iris and white pupils. Body is profusely spotted with white and blue spots.

Female Larva

Wet (monsoon) form: Colour is dark chocolate/red brown from 1st to 5th instar (Plate 2, Fig. 4). Spiracular patches are greatly reduced and red in colour and are not connected by white band as in males. Body profusely spotted with white spots. 5th and 6th somite bear brown ocelli with white iris and white pupils. Legs red-brown throughout.

Dry (post monsoon) form: Colour blackish brown or chocolate brown (Plate 2, Fig. 1). Spiracular patches are greatly reduced and red in colour. 5th somite bears brown ocelli with yellow iris and white pupils which are greatly reduced on 6th somite. Body profusely spotted with white, and encircled by brown ring. Legs chocolate brown.

Description of pupa

After 18 to 20 days, the larva stops feeding thereafter and encloses itself among leaves. The pupa forms within 36 hours and is attached to the corner of leaves with the help of silk thread. The average pupal duration is 13 days in wet season and 18 days in dry season. Male: Dark mahogany, glossy, smaller than female (Plate 1, Fig. 3). Female: Light brown, glossy, larger than male (Plate 2, Fig. 2 & 5).

Description of Adults

The detailed description of adult was given by Sevastopolo (1941) and Hampson (1894). Palpi in both male and female are club shaped with fluorescent blue projection. Both males and females are slightly lighter coloured in wet season than in the dry season.

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